



Mark Scheme

June 2023

Pearson Edexcel Level 2 Award
In Numbers and Measures (ANM20)
Paper 2B

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Summer 2023

Publications Code ANM20_2B_2306_MS

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NOTES ON MARKING PRINCIPLES

1 **Types of mark**

M marks: method marks

A marks: accuracy marks

B marks: unconditional accuracy marks (independent of M marks)

2 **Abbreviations**

cao – correct answer only

isw – ignore subsequent working

oe – or equivalent (and appropriate)

indep - independent

ft – follow through

SC: special case

dep – dependent

3 **No working**

If no working is shown then correct answers normally score full marks

If no working is shown then incorrect (even though nearly correct) answers score no marks.

4 **With working**

If there is a wrong answer indicated on the answer line always check the working in the body of the script (and on any diagrams), and award any marks appropriate from the mark scheme.

If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.

If it is clear from the working that the “correct” answer has been obtained from incorrect working, award 0 marks.

Send the response to review, and discuss each of these situations with your Team Leader.

If there is no answer on the answer line then check the working for an obvious answer.

Any case of suspected misread loses A (and B) marks on that part, but can gain the M marks. Discuss each of these situations with your Team Leader.

If there is a choice of methods shown, then no marks should be awarded, unless the answer on the answer line makes clear the method that has been used.

Follow through marks

Follow through marks which involve a single stage calculation can be awarded without working since you can check the answer yourself, but if ambiguous do not award.

Follow through marks which involve more than one stage of calculation can only be awarded on sight of the relevant working, even if it appears obvious that there is only one way you could get the answer given.

6 Ignoring subsequent work

It is appropriate to ignore subsequent work when the additional work does not change the answer in a way that is inappropriate for the question: e.g. incorrect cancelling of a fraction that would otherwise be correct

It is not appropriate to ignore subsequent work when the additional work essentially makes the answer incorrect e.g. algebra.

Transcription errors occur when candidates present a correct answer in working, and write it incorrectly on the answer line; mark the correct answer.

7 Parts of questions

Unless allowed by the mark scheme, the marks allocated to one part of the question CANNOT be awarded in another.

8 Use of ranges for answers

If an answer is within a range this is inclusive, unless otherwise stated.

Question	Working	Answer	Mark	Notes
1		-7, -5, -2, -1 2, 3, 4, 8	1	B1 cao
2		27, 45	2	M1 for $72 \div 8 (=9)$ or at least three other ratios that are equivalent to 3 : 5; other equivalencies may be allowed. A1 for the numbers 27 and 45; accept either order
3		83.67	1	B1 cao
4		13 : 42	1	B1 cao
5 (a)		141.48	2	M1 for correct alignment of digits ready for calculation with two operations performed correctly eg $129+45.18+17.3 (=191.48)$ or $129+45.18-50 (=124.18)$ or $45.18+17.3-50 (=12.48)$ or $129+17.3-50 (=96.3)$ NB operations can occur at any stage of a partitioned calculation but must be equivalent to those shown above or for correct addition of all 4 numbers ($=241.48$) A1 cao

Question	Working	Answer	Mark	Notes																																	
(b)		193.76	2	<p>M1 for evidence of correctly set up method, which may be by traditional methods, by a bones method or using grids, or partitioning; or correct multiplication seen eg carry 5 from 8×7 within a correct method, 7 lots of 27.68 added</p> <p>2768 _____7 × 19376</p> <p>or digits 19376 with no more than 2 digits incorrect</p> <table border="1"><tr><td></td><td>2</td><td>7</td><td>6</td><td>8</td><td>×</td></tr><tr><td>1</td><td><div>1 4</div></td><td><div>4 9</div></td><td><div>4 2</div></td><td><div>5 6</div></td><td>7</td></tr><tr><td></td><td>9</td><td>3</td><td>7</td><td>6</td><td></td></tr></table> <table border="1"><tr><td>×</td><td>2000</td><td>700</td><td>60</td><td>8</td></tr><tr><td>7</td><td>14000</td><td>4900</td><td>420</td><td>56</td></tr><tr><td>or</td><td>140</td><td>49</td><td>4.2</td><td>.56</td></tr></table> <p>A1 cao</p>		2	7	6	8	×	1	<div>1 4</div>	<div>4 9</div>	<div>4 2</div>	<div>5 6</div>	7		9	3	7	6		×	2000	700	60	8	7	14000	4900	420	56	or	140	49	4.2	.56
	2	7	6	8	×																																
1	<div>1 4</div>	<div>4 9</div>	<div>4 2</div>	<div>5 6</div>	7																																
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×	2000	700	60	8																																	
7	14000	4900	420	56																																	
or	140	49	4.2	.56																																	
6 (a)		$\frac{35}{66}$	1	<p>B1 for $\frac{35}{66}$ or for any equivalent fraction;</p> <p>NB: do not isw incorrect cancelling</p>																																	
(b)		$\frac{5}{12}$	2	<p>M1 for use of common denominator with at least one correct numerator eg $\frac{7}{12} - \frac{2}{12}$ or $\frac{42}{72} - \frac{12}{72}$ oe</p>																																	

Question	Working	Answer	Mark	Notes
				A1 for $\frac{5}{12}$ oe eg $\frac{30}{72}$ [Condone incorrect cancelling]
7		168	3	<p>M1 for 30% of 240 eg $\frac{30}{100} \times 240 (=72)$ oe or 10% as 24 and 30% as $3 \times "24"$ or any alternative partitioning method</p> <p>M1 for $240 - "72"$ or for 240×0.7 oe</p> <p>A1 cao</p>
8	(a)	$\frac{2}{5}$ of 35	3	<p>M1 for $78 \div 6 (=13)$ or for $35 \div 5 \times 2 (=14)$ oe</p> <p>A1 for 13 and 14</p> <p>A1 ft (dep on M1 and on two figures shown) for conclusion eg "$\frac{2}{5}$ of 35"</p>
	(b)	$\frac{7}{40}$	2	<p>M1 for $\frac{700g}{4kg}$ (with units) or $\frac{700}{4000}$ or any equivalent fraction to this; award this mark (if correct working shown) even if incorrect cancelling is also shown</p> <p>A1 cao</p>
9		90	3	M1 for $63 \div 7 (=9)$ or $63 \times 10 (=630)$

Question	Working	Answer	Mark	Notes
				M1 for a complete method eg “9” × 10 or “630” ÷ 7 or 3×“9” + 63 A1 cao
10	$\frac{70 \times 48}{12} = \frac{3360}{12}$ or $70 \times 4, 71 \times 4$ $\frac{71 \times 48}{12} = \frac{3408}{12}$ $\frac{70 \times 50}{10} = \frac{3500}{10}$ $\frac{71 \times 50}{10} = \frac{3550}{10}$	280 to 355	2	M1 for rounding at least two figures to 70, 71, 48, 50, 10 or 12 (which could be evidenced through partial calculation) or for rounding and one operation using figures that make the arithmetic simple eg sight of 4, 5, 7, 3360, 3408, 3500, 3550 A1 (dep M1) for answer in the range 280 to 355
11		20	2	M1 for $\frac{80}{400}$ (=0.2) oe or $\frac{80}{4}$ or a complete partitioning method eg 40 is 10%, 80 is 2 × 10% oe A1 cao
12		$6\frac{3}{20}$	3	M1 for use of a common denominator with at least one correct numerator eg $\frac{15}{20} + \frac{8}{20}$ or $\frac{19 \times 5}{20} + \frac{7 \times 4}{20}$ or $\frac{95}{20} + \frac{28}{20}$ A1 for correct but not as a mixed number in its simplest form eg $5\frac{23}{20}$, $\frac{123}{20}$ A1 cao

